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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,631	06/26/2006	Thomas Gessner	292331US0PCT	6111
22850	7590	06/05/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER MCDOWELL, BRIAN E	
			ART UNIT 4161	PAPER NUMBER
			NOTIFICATION DATE 06/05/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,631	<b>Applicant(s)</b> GESSNER ET AL.	
	<b>Examiner</b> BRIAN MCDOWELL	<b>Art Unit</b> 4161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 12/30/2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/24/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10 2004 001 457.4, filed on 01/08/04. However, no English translation was provided.

An action on the merits is described below for claims 1-7.

### ***Claim Objections***

Claims 3-4 are objected because of the following informalities: (1) in claim 3, the article "the" should be placed before the word "inert solvent" in the phrase " wherein 3-dimethylaminopropanol or n-butyl glycol is used as inert solvent"; and (2) in claim 4, the article "the" should be placed before "alkali metal hydroxide" in the phrase "wherein sodium hydroxide, potassium hydroxide, sodium carbonate or potassium carbonate are used as alkali metal hydroxide or alkali metal carbonate.

### ***Claim Rejections - 35 USC § 112 (2<sup>nd</sup> Paragraph)***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, applicant recites the following: "which can still comprise one or two additional nitrogen atoms or an additional oxygen or sulfur atom". Applicant fails to distinctly clarify what particular part of the molecule that the limitation is making reference to. As it currently appears in the claim, there is no clear distinction to whether this limitation applies to the benzene ring or the heterocyclic ring attached to it.

Claim 7 is rejected because it recites the limitation "the process according to". There is insufficient antecedent basis for this limitation in the claim.

Claims 2-6 are rejected because they are dependent upon rejected base claim 1.

Thus, claims 1-7 are rejected for indefiniteness by USC § 112, 2<sup>nd</sup> paragraph for failing to clearly point out the claim limitations.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brach *et al.* (J. Heterocyclic Chem.) in view of Rintelman (U.S. Patent 2485168) and Paidi *et al.* (JP 2003040892 A)

Instant claims 1-7 recites a process for preparing metal-free phthalocyanines of formula I.

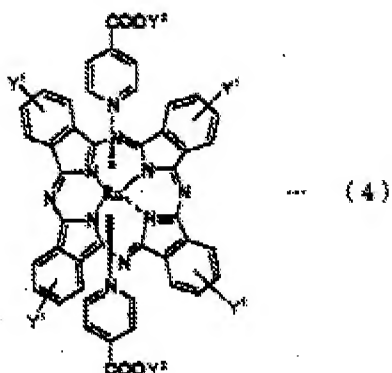
Brach *et al.* discloses a process for preparing metal-free phthalocyanines. Furthermore, Brach *et al.* teaches that these metal-free phthalocyanines can be prepared by heating a phthalonitrile and ammonia in an inert organic solvent (see pg 1404, first paragraph). Representative phthalonitriles used in this process were unsubstituted and substituted. However, Brach *et al.* does not teach this process using an alkali metal carbonate or hydroxide. Additionally, 5 or 6 membered saturated heterocycles attached to the phthalocyanine ring are not specifically disclosed in this document.

Rintelman discloses a process for preparing metal-free phthalocyanines. Rintelman furthermore teaches that metal-free phthalocyanines can be prepared in a similar manner as above with unsubstituted and substituted phthalonitriles; but with the addition of potassium carbonate. (see col. 2, lines 35-37).

Paidi *et al.* teaches ruthenium phthalocyanines. Furthermore, Paidi *et al.* teaches ruthenium phthalocyanines that contain 6-membered heterocycles (see below and page 6, equation 4), their preparation, and derivatives.

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\* \* 【表1】

試料番号	Y¹	Y²
1	-H	-H
2	-H	-CH₂CH₃
3	-O(CH₃)₃	-H
4	-O(CH₃)₃	-CH₂CH₃
5		-H
6		-CH₂CH₃
7		-H
8		-CH₂CH₃
9		-H
10		-CH₂CH₃

Therefore, it would be obvious for one of ordinary skill in the art at the time the invention was made to modify the process described by Brach *et al.*, and add potassium carbonate to the reaction mixture and afford a process for the preparation of substituted metal-free phthalocyanines. The above synthetic processes by Brach *et al.* and Rintelman were mentioned to be amenable to both unsubstituted and substituted phthalonitriles, however the inventors were not motivated at the time to synthesize

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compounds containing 5 or 6 membered saturated heterocycles. In addition, the unique feature claimed by applicant (wherein a 5 or 6 membered saturated heterocycle is attached to the phthalocyanine ring) is not necessarily novel as evidenced by JP 2003040892 A. Therefore, one would be motivated at the time the invention was made to develop a synthetic route to phthalocyanines possessing 5 or 6 membered saturated heterocycles. Thus applicant's claims are obvious and therefore rejected under 35 U.S.C. 103.

### ***Conclusion***

Claims 1-7 are pending. Claims 1-7 are rejected. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN MCDOWELL whose telephone number is (571)270-5755. The examiner can normally be reached on Monday-Thursday 7:30-5:00.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Nolan can be reached on 571-272-0847. The fax phone number for the organization where this a Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Patrick J. Nolan/

Supervisory Patent Examiner, Art Unit 4161